What is claimed is:

1. A method using magnetism for forming an anastomosis between first and second hollow bodies each of which has a lumen and an opening extending into the lumen, the method comprising steps of:

(a) positioning a first securing component adjacent the opening in the first hollow body;

(b) positioning a second securing component adjacent the opening in second hollow body; and

(c) using magnetic force to form an anastomosis between the first and second hollow bodies with the lumens of the first and second hollow bodies in communication .

2. The method of claim 1, wherein the first and second hollow bodies are vessels that carry blood and at least one of steps (a) and (b) is performed without everting either vessel.

3. The method of claim 1, wherein the first and second hollow bodies are first and second blood vessels that are placed in fluid communication, and at least one of steps (a) and (b) is performed so that at least one of the first and second securing components is exposed to blood flow.

4. The method of claim 3, wherein at least one of steps (a) and (b) is performed by positioning at least one of the first and second securing components through an opening formed in a wall of one of the first and second vessels.

5. The method of claim 4, wherein said step is performed by positioning the one securing component substantially entirely within the lumen of the one vessel.

6. The method of claim 4, further comprising the step of maintaining the opening in the wall of the one vessel after placement of the one securing component.

7. The method of claim 6, wherein the one securing component includes an extension, and further comprising the step of positioning the securing component within the lumen of the one vessel with the extension extending through the opening in the wall of the vessel.

8. The method of claim 1, wherein step (c) is performed by using magnetic force to bias the first and second securing components to join the first and second hollow structures in communication .

9. The method of claim 1, wherein the steps are performed to create an anastomosis selected from the group consisting of end-to-side and side-to-side anastomoses.

10. The method of claim 9, wherein steps (a) and (b) are performed by positioning first and second securing components that are formed at least in part of a material selected from the group consisting of magnetic, electromagnetic and ferromagnetic materials.

11. The method of claim 10, wherein step (a) is performed by positioning a first securing component that is formed of a magnetic material and step (b) is performed by positioning a second securing component that is formed of a ferromagnetic material.

12. The method of claim 10, wherein steps (a) and (b) are performed by positioning first and second securing components that are respectively formed of magnetic materials having opposite polarity.

13. The method of claim 1, wherein the anastomosis is formed solely by magnetic force.

14. The method of claim 1, further comprising the step of preventing the first and second securing components from migrating toward each other beyond a predetermined distance.

15. The method of claim 1, wherein at least one of steps (a) and (b) is performed by forming a noncircular opening in the hollow body.

16. A method using magnetism for forming an anastomosis between first and second hollow bodies each of which has a lumen, the method comprising the step of:

(a) using magnetic force to form an anastomosis between first and second hollow bodies with the lumens of the first and second hollow structures in communication ;

(b) wherein the first hollow body has proximal and distal portions, and the anastomosis formed according to step (a) is disposed between the proximal and distal portions of the first hollow body.

17. The method of claim 16, wherein step (a) is performed to create an anastomosis selected from the group consisting of end-to-side and side-to-side anastomoses.

18. The method of claim 16, wherein the first hollow body is a native blood vessel and the second hollow body is a graft vessel.

19. A method using magnetism for forming an anastomosis between first and second hollow bodies each of which has a lumen and an opening extending into the lumen, the method comprising steps of:

(a) positioning a first securing component adjacent an opening in the first hollow body;

(b) positioning a second securing component adjacent an opening in the second hollow body; and

(c) using magnetic force to form an anastomosis between the first and second hollow bodies with the lumens of the first and second hollow structures in communication ;

(d) wherein at least one of steps (a) and (b) is performed without everting tissue.

20. The method of claim 19, wherein each of the first and second securing components is positioned adjacent the opening in a respective hollow body without everting tissue of the hollow body.

21. The method of claim 19, wherein the anastomosis is selected from the group consisting of end-to-side and side-to-side anastomoses.

22. The method of claim 19, wherein at least one of the first and second securing components includes two members, and at least one of steps (a) and (b) is performed by positioning the two members adjacent internal and external surfaces of the wall of one of the first and second hollow bodies such that the two members remain in position with respect to the wall of said one body by magnetic force.

23. The method of claim 22, wherein the other of the first and second securing components includes two members, and the other of steps (a) and (b) is performed by positioning the two members adjacent internal and external surfaces of the wall of the other of the first and second hollow bodies such that the two members remain in position with respect to the wall of said other body by magnetic force.

24. A method using magnetism for forming an anastomosis between first and second hollow bodies each of which has a blood-carrying lumen, the method comprising steps of:

(a) positioning a first securing component adjacent the first hollow body;

(b) positioning a second securing component adjacent the second hollow body; and

(c) using magnetic force to control the relative position of the first and second securing components and form an anastomosis between the first and second hollow bodies with the blood-carrying lumens of the first and second hollow bodies in communication ;

(d) wherein at least one of the first and second securing components is at least partially disposed within the blood-carrying lumen of one of the first and second hollow bodies.

25. The method of claim 24, wherein the one securing component is substantially entirely disposed within the blood-carrying lumen of the one hollow body.

26. The method of claim 24, wherein the anastomosis formed according to step (c) is selected from the group consisting of end-to-side and side-to-side anastomoses.

27. A method for forming an anastomosis between first and second hollow bodies each of which has a wall and a blood-carrying lumen, the method comprising steps of:

(a) positioning a first securing component through an opening in the wall of the first hollow body and at least partially within the lumen of the first hollow body;

(b) positioning a second securing component adjacent the second hollow body;

(c) applying a coupling force to the first and second securing components without penetrating the wall of the first hollow body; and

(d) forming a seal between the first and second hollow bodies with the lumens of the first and second hollow bodies in communication ;

(e) wherein the coupling force is applied and the seal is formed at substantially the same location.

28. The method of claim 27, wherein step (c) is performed by using magnetism to apply the coupling force to the first and second securing components.

29. The method of claim 28, wherein the opening in the first hollow body is an incision through which the first securing component is passed, and the coupling force is applied and the seal is formed at a location that is spaced from the incision in a radial direction.

30. The method of claim 29, wherein the anastomosis is selected from the group consisting of end-to-side and side-to-side anastomoses.

31. The method of claim 30, wherein the first hollow body is a native blood vessel and the second hollow body is a synthetic blood vessel.

32. A system for forming an anastomosis between first and second hollow bodies in a patient's body, the system comprising:

first and second securing components capable of producing a magnetic field that applies force to maintain the securing components in a desired relative position;

wherein the first securing component is substantially plate-shaped and sized and configured to be at least partially received in a lumen of a hollow body in a patient's body, the first securing component having an opening; and

wherein the second component is sized and configured to be positioned adjacent a second hollow body in the patient's body for forming an anastomosis between the first and second hollow bodies, the second securing component having an opening.

33. The system of claim 32, wherein the first securing component has a first dimension measured in a first direction, and the first dimension is less than 1 mm.

34. The system of claim 32, wherein the first securing component is substantially flat along the length.

35. The system of claim 32, wherein at least one of the first and second securing components has a shape selected from the group consisting of circular, elliptical and racetrack shaped configurations.

36. The system of claim 35, wherein both of the first and second securing components have a shape selected from the group consisting of circular, elliptical and racetrack shaped configurations.

37. The system of claim 36, wherein the first and second securing components have a substantially complementary shape.

38. The system of claim 32, wherein the first and second securing components are formed at least in part of a material selected from the group consisting of magnetic, electromagnetic and ferromagnetic materials.

39. The system of claim 38, wherein the first securing component is formed of a magnetic material and the second securing component is formed of a ferromagnetic material.

40. The system of claim 38, wherein the first and second securing components are respectively formed of magnetic materials having opposite polarity.

41. The system of claim 38, wherein at least one of the first and second securing components includes magnetic and non-magnetic portions.

42. The system of claim 41, wherein the one securing component is at least partially collapsible.

43. The system of claim 32, wherein the first and second securing components are configured to apply a magnetic force that is less than 0.25 lbs.

44. The system of claim 32, wherein at least one of the first and second securing components has a thickness less than 0.040".

45. The system of claim 442, wherein the thickness of the one securing component has a thickness less than 0.020".